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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,657	06/24/2003	James A. DiCarlo	61011.00005	1278

7590 01/25/2008  
Squire, Sanders & Dempsey LLP  
14th Floor  
8000 Towers Crescent Drive  
Tysons Corner, VA 22182

EXAMINER
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CROUSE, BRETT ALAN

ART UNIT	PAPER NUMBER
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1794

MAIL DATE	DELIVERY MODE
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01/25/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/601,657

Applicant(s)

DICARLO ET AL.

Examiner

Brett A. Crouse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-15 is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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### **DETAILED ACTION**

This office action is in response to the reply, filed 25 September 2007. Claims 1-15 are pending.

#### ***Response to Amendment***

The rejections of:

claims 8, 9 and 11-15 under 35 U.S.C. 103(a) as being unpatentable over Rocher et al US 5476685 in view of Fehrenbacher et al US 6506483 B1;

and;

claim 10 under 35 U.S.C. 103(a) as being unpatentable over Rocher et al US 5476685 in view of Singh et al US 5945166 and Fehrenbacher et al 6506483 B1;

are withdrawn in view of applicant's arguments, filed 25 September 2007.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The rejections of:

claims 1, 4, 5, and 7 under 35 U.S.C. 102(b) as being anticipated by Warren, US 4,397,901;

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claims 1, 2, 4, and 5 under 35 U.S.C. 102(b) as being anticipated by Ray, US 5,098,871 as evidenced by (Nicalon, in About: Composites / Plastics, <http://composite.about.com/library/glossary/n/bldef-n3600.htm>) and (Silicon Carbide Continuous Fiber, Nippon Carbon Co., LTD, <http://www.carbon.co.jp/english/products/develop/develop.html>);

claims 1,4 and 5 under 35 U.S.C. 103(a) as being unpatentable over Rocher et al US 5476685 in view of Fehrenbacher et al US 6506483 B1;  
and;

claims 2,3,6 and 7 under 35 U.S.C. 103(a) as being unpatentable over Rocher et al., US 5476685 in view of Singh et al., US 5945166 and Fehrenbacher et al., US 6506483 B1;

are maintained for reasons of record in the office action, mailed 30 May 2007.

### ***Response to Arguments***

With respect to the rejections of:

claims 1, 4, 5, and 7 under 35 U.S.C. 102(b) as being anticipated by Warren, US 4,397,901;  
and;

claims 1, 2, 4, and 5 under 35 U.S.C. 102(b) as being anticipated by Ray, US 5,098,871 as evidenced by (Nicalon, in About: Composites / Plastics, <http://composite.about.com/library/glossary/n/bldef-n3600.htm>) and (Silicon Carbide

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Continuous Fiber, Nippon Carbon Co., LTD,

<http://www.carbon.co.jp/english/products/develop/develop.html>;

applicant argues that Warren and Ray both fail to teach fiber debonding after matrix consolidation.

The requirement for fiber debonding after matrix consolidation is a product-by-process limitation. Both Warren and Ray each teach a product in which the fibers can move relative to the matrix. Applicant is reminded that "if the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process" (MPEP 2113), *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

With respect to the rejections of:

claims 1,4 and 5 under 35 U.S.C. 103(a) as being unpatentable over Rocher et al US 5476685 in view of Fehrenbacher;  
and;

claims 2,3,6 and 7 under 35 U.S.C. 103(a) as being unpatentable over Rocher et al., US 5476685 in view of Singh et al., US 5945166 and Fehrenbacher et al., US 6506483 B1;  
applicant argues that Rocher does not teach or suggest fiber debonding after matrix consolidation and that this deficiency is not cured by either Fehrenbacher or Singh.

The requirement for fiber debonding after matrix consolidation is a product-by-process limitation. Fehrenbacher teaches thermal treatments, a fiber/matrix interface coating capable of transmitting load from the matrix to the fibers as well as deflecting matrix

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cracks, and debonding. It is submitted that with lack of evidence to the contrary the product of Rocher/Fehrenbacher and Rocher/Fehrenbacher/Singh is equivalent to the product claimed in the instant invention.

***Allowable Subject Matter***

Claims 8-15 are allowed.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brett A. Crouse whose telephone number is 571-272-6494. The examiner can normally be reached on Monday - Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terell H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BAC/ 13 January 2008



**Ms. Arti R. Singh**  
Primary Examiner  
Tech Center 1700